SAMSUNG TECHWIN

NETWORK VIDEO DECODER

User Manual

SPD-400

CE

SAMSUNG

Network Video Decorder

User Manual

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Warranty

If the product does not operate properly in normal conditions, please let us know. Samsung Techwin will resolve the problem for free of charge. The warranty period is 3 years. However, the followings are excluded:

- If the system behaves abnormally because you run a program irrelevant to the system operation.
- Deteriorated performance or natural worn-out in process of time

❖ **Design and specifications are subject to change without prior notice.**

❖ **The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.**
Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety, If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/ accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

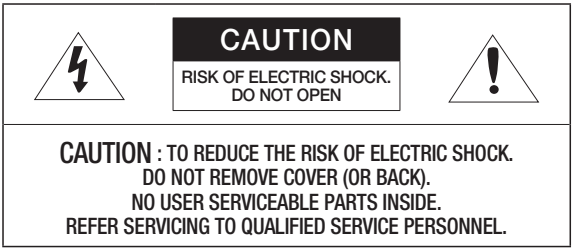
13. Unplug this apparatus during lighting storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PROCUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENNINGS ON THE EQUIPMENT.

Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

CAUTION


CAUTION
RISK OF ELECTRIC SHOCK.
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

EXPLANATION OF GRAPHICAL SYMBOLS

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Class I construction

An apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

Battery

Batteries(battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.
It is essential that when changing the battery in the unit, the replacement battery must be of the same type otherwise there may be a possibility of an explosion.

CALIFORNIA USA ONLY

This Perchlorate warning applies only to primary CR (Manganese Dioxide) Lithium coin cells in the product sold or distributed ONLY in California USA. “Perchlorate Material - special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate.”

CAUTION

These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Please use the input power with just one camera and other devices must not be connected.

overview

Please read the following recommend safety precautions carefully.

- Do not Place this apparatus on an uneven surface.
- Do not install on a surface where it is exposed to direct sunlight, near heating equipment or heavy cold area.
- Do not place this apparatus near conductive material.
- Do not attempt to service this apparatus yourself.
- Do not place a glass of water on the product.
- Do not install near any magnetic sources.
- Do not block any ventilation openings.
- Do not place heavy items on the product.

User's Manual is a guidance book how to use the products

The meaning of the using sign in the book is following

- Reference : In case of providing information for helping of product's usages
- Notice : If there's any possibility to occur any damages for the goods and human caused by not following the instruction

※ Please read this manual for the safety before using of goods and keep it in the safe place.

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PRODUCT FEATURES

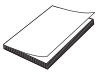
- **Supports Multi-format decoding**
  The network video decoder employs H.264/MPEG-4/MJPEG multi-format decoder to decode and display up to 4 video streams transferred through network.
- **Supports Full-HD Video Display**
  The maximum supported output resolution is 1920x1080, and provides HDMI, VGA and CVBS (BNC) output ports for display.
- **Alarm Monitoring**
  When an event occurs at a network camera or the encoder, the monitoring display switches to the corresponding video according to the settings.

RECOMENDED PC SPECIFICATIONS

- CPU : Intel(R) Core(TM)2 2.00 GHz or higher
- Operating System : Windows XP, VISTA, 7
  Mac OS
- Resolution : 1280X1024 pixels or higher
- RAM : 1GB or higher
- Web Browser : Internet Explorer 7.0 or 8.0, Firefox, Chrome, Safari
- Video Memory : 128MB or higher

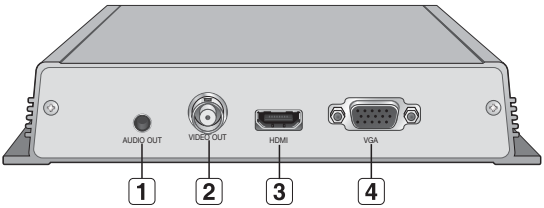
WHAT'S INCLUDED

Please check if your network video decoder and accessories are all included in the product package.

Appearance	Item Name	Quantity	Description
	SPD-400	1	
	User Manual CD	1	
	Quick Guide	1	
	ASSY-Tapping Screw	4	Used for installation on the wall

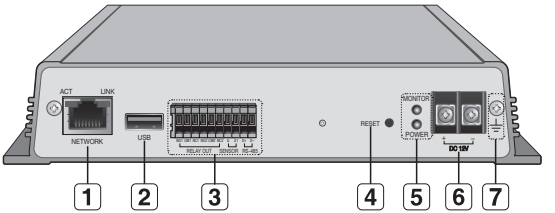
AT A GLANCE

Front Side



Item	Description
1 AUDIO OUT	This port outputs selected audio from the device connected through the network, according to the settings.
2 VIDEO (CVBS) OUT	A BNC output port for display. This port outputs video only if CVBS mode is selected.
3 HDMI	An HDMI output port for display. This port outputs video only if HDMI or VGA mode is selected.
4 VGA	A VGA output port for display. This port outputs video only if HDMI or VGA mode is selected.

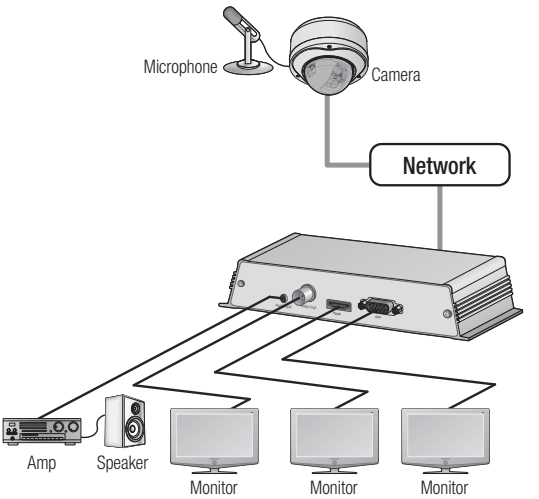
Rear Side



Item	Description	
1 NETWORK	Used to connect a LAN cable.	
2 USB	This function is not currently available.	
3 I/O Port	RS-485 D+/D-	This function is not currently available.
	NO1/NO2	Alarm Out (for Normal Open)
	CM1/CM2	Alarm Out (for Common)
	NC1/NC2	Alarm Out (for Normal Close)
	S1	An alarm input sensor port.
	G	Earth-grounding port for external signal.
4 RESET	This button initializes network video decoder settings, or selects the monitor output. Press and hold for 5 seconds or longer, then the system indicator turns off, settings are initialized, and will restart. Press the button for about 1 second, then the MONITOR LED color changes as the video output mode changes.	

Item		Description	
5 Power, Monitor LED	MONITOR	Indicates the video output mode. Green : HDMI or VGA output mode. Yellow : CVBS output mode. ■ To change the video output mode, change it in Web Viewer's video settings or press the [**RESET**] button for about 1 second.
	POWER	ON : While the power is on. OFF : If the power is off.
6 Power Port	Used to connect the specified power source.		
7 GND	Used for earth-grounding.		

CONNECTING WITH OTHER DEVICE



Connecting Video Out

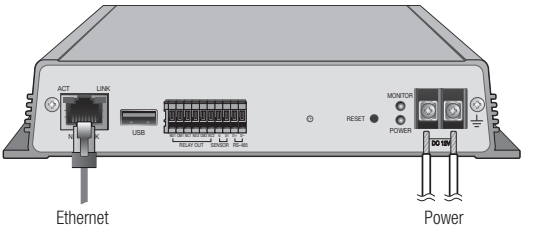
Connect a monitor to the preferred video output of the network video decoder.

- It outputs video through the port according to the setting configured in the Web Viewer's "**Display Setup** > **Monitor**". (Page 37)
- When in HDMI or VGA output mode, the display may not render properly if configured resolution is not supported by the monitor.
- Press and hold [**RESET**] button for about 1 second to change the video output mode.
- The MONITOR LED changes its color accordingly.

Connecting Audio In/Out

1. Connect a microphone to the network camera or encoder, and set Audio setting of corresponding device to <**ON**>.
2. Set Network AUDIO SETUP to ON in Video Decoder's single layout settings, and select its output from Line Out and HDMI out in Audio Settings. Note that HDMI OUT for audio output can be selected only when the monitor out is set to HDMI.
3. When using Line Out, connect the speaker's LINE IN and Network Video Decoder's AUDIO OUT terminals.
4. For HDMI output, connect an HDMI monitor to HDMI port.
   - For HDMI audio output, a monitor with built-in speaker is required.

- There is some possibility that HDMI audio doesn't work with some specific monitors.



Ethernet Connection

Connect the Ethernet cable to the local network or to the Internet.

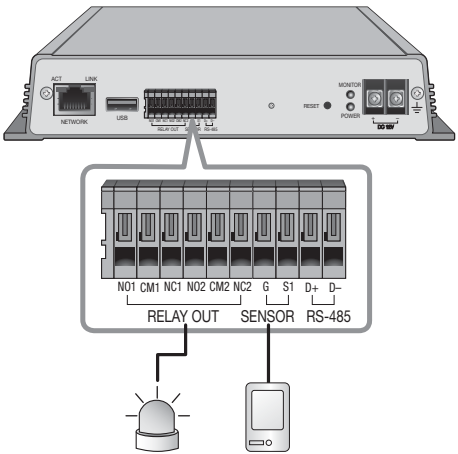
Power Supply

Use the screwdriver to connect each line (+, –) of the power cable to the corresponding power port of the network encoder.

- Be careful not to reverse the polarity when you connect the power cable.
- Please make sure the monitor and network video decoder are turned off when connecting them.

Connecting to the I/O port box

Connect the Alarm I/O signal to the corresponding port of the rear port box.



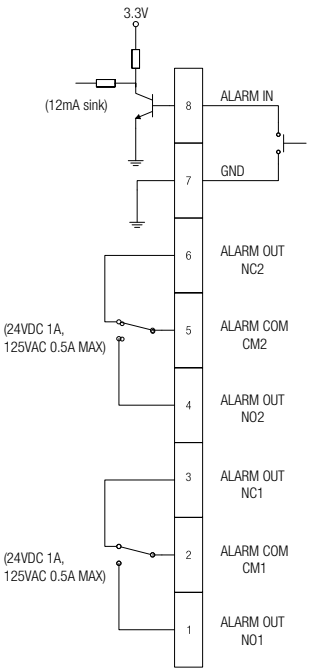
Connecting to the Alarm Input

Connect one signal cable (out of 2) of applicable sensor to the [**S1**] port, and the other to the [**G**] port.

Connecting the Alarm Output

Connect one signal cable (out of 2) of applicable external device to the [**RELAY OUT(NC, NO)**], and the other to the [**CM**] port.

Alarm I/O Wiring Diagram



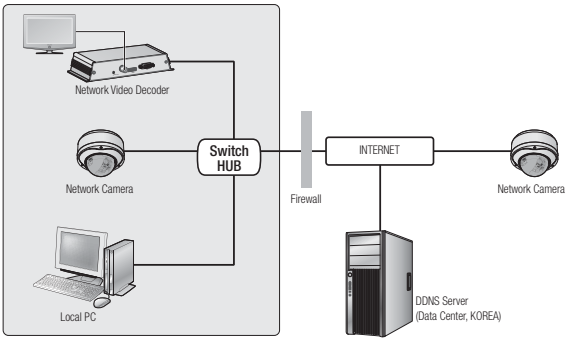
network connection and setup

You can configure the Network Video Decoder's network settings to your preference.

CONFIGURING NETWORK VIDEO DECODER IN LAN ENVIRONMENTS

Accessing the Network Video Decoder from a PC within the same LAN

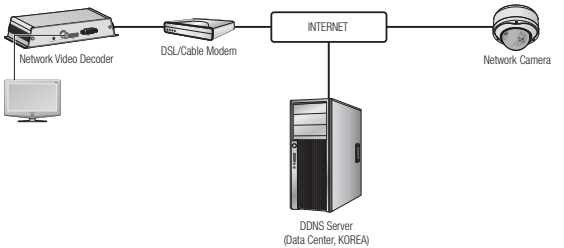
1. Launch an Internet browser on the local PC.
2. Enter the IP address of the Network Video Decoder into the browser's address field.



<Local Network>

- A remote PC in an external Internet out of the LAN network may not be able to connect to the network video decoder installed in the intranet if a firewall is set.
  In this case, to resolve the problem, contact your network administrator.
- The default IP address is set to 192.168.1.200.
  To change the IP address, use the IP Installer.
  For further details on IP Installer use, refer to "**Static IP Setup**". (Page 23)

CONNECTING THE NETWORK VIDEO DECODER DIRECTLY TO DHCP-BASED DSL/CABLE MODEM

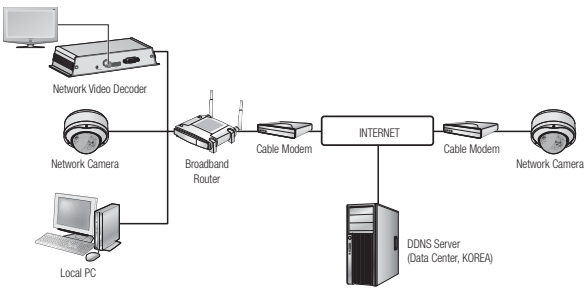


1. Use a cross cable to connect a computer and the Network Video Decoder.
2. Run the IP Installer and change the IP address of the Network Video Decoder so that you can use the web browser on your desktop to connect to the Internet.
3. Access the Network Video Decoder using an Internet browser.
4. Move to [**Setup**] page.
5. Move to [**Network**] – [**Interface**], and set the network type to [**DHCP**].
6. Connect the Network Video Decoder, which was removed from your PC, directly to the modem.
7. Restart the Network Video Decoder.

- For setting the network type, refer to "**Interface**". (page 39)

CONNECTING THE NETWORK VIDEO DECODER AND BROADBAND ROUTER THAT IS CONNECTED TO THE CABLE MODEM

This is for a small network environment such as homes, SOHO and ordinary shops.



Configuring the network settings of the local PC connected to a Broadband Router

Configuring the network settings of the local PC connected to a Broadband Router, follow the instructions below.

- Select : <**Network Neighborhood**> → <**Properties**> → <**Local Area Connection**> → <**Properties**> → <**General**> → <**Internet Protocol (TCP/IP)**> → <**Properties**> → <**Obtain an IP address automatically**> or <**Use the following IP address**>.
- Follow the instructions below if you select <**Use the following IP address**>:

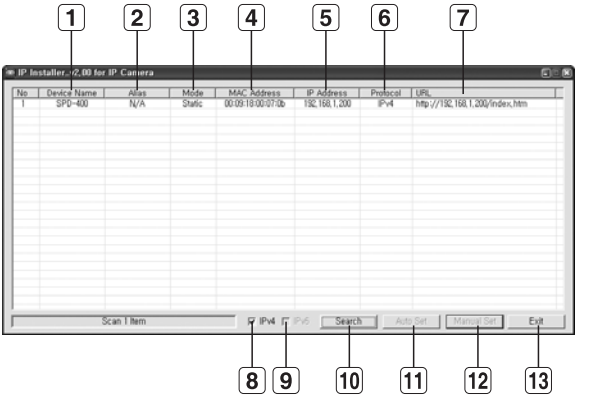
ex1) If the address (LAN IP) of the Broadband Router is 192.168.1.1
IP address : 192.168.1.200
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.1.1

ex2) If the address (LAN IP) of the Broadband Router is 192.168.0.1
IP address : 192.168.0.200
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.0.1

ex3) If the address (LAN IP) of the Broadband Router is 192.168.xxx.1
IP address : 192.168.xxx.200
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.xxx.1

▪ For the address of the Broadband Router, refer to the product's documentation.

BUTTONS USED IN IP INSTALLER



Item	Description
1 Device Name	Model name of the connected network device. Click the column to sort the list by model name. However, search will be stopped if clicked during the search.
2 Alias	This function is not currently implemented.
3 Mode	Displays either <**Static**> or <**Dynamic**> for the current network connection status.
4 MAC(Ethernet) Address	Ethernet address of the connected network device. Click the column to sort the list by Ethernet address. However, search will be stopped if clicked during the search.
5 IP Address	IP address. Click the column to sort the list by IP address. However, search will be stopped if clicked during the search. The factory default is "**192.168.1.200**".
6 Protocol	Network settings of the network device. The factory default is "IPv4". Network encoders with the IPv6 setting will be displayed "IPv6".

Item	Description
7 URL	Shows URL address.
8 IPv4	Scans for network device with the IPv4 setting.
9 IPv6	Scans for network device with the IPv6 setting. Activated in an IPv6 compliant environment.
10 Search	Scans for network devices that are currently connected to the network. However, this button will be grayed out if neither IPv4 nor IPv6 is checked.
11 Auto Set	The IP Installer automatically configures the network settings.
12 Manual Set	You should configure the network settings manually.
13 Exit	Exits the IP Installer program.

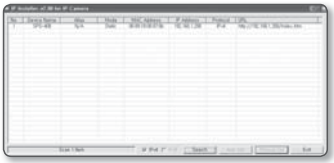
- For the IP installer, use only the installer version provided in the installation CD or use the latest one if available.
  You can download the latest version from the Samsung web site (www.samsungipolis.com).

STATIC IP SETUP

Manual Network Setup

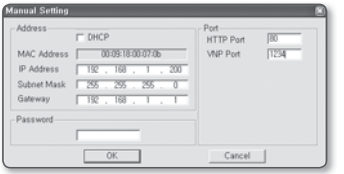
Run <**IP Installer_vX.XX.exe**> to display the network device search list.
At the initial startup, both [**Auto Set**] and [**Manual Set**] will be grayed out.

- For network devices found with the IPv6 setting, these buttons will be grayed out as the network devices do not support this function.



1. Select a network device from the search result.
   Find the MAC (Ethernet) address labeled on the rear of the network device.
   Both the [**Auto Set**] and [**Manual Set**] buttons will be activated.
2. Click [**Manual Set**].
   The Manual Setting dialog appears.
   The default values of <**IP Address**>, <**Subnet Mask**>, <**Gateway**>, <**HTTP Port**> and <**VNP Port**> of the network device will be displayed.

3. In the <**Address**> pane, provide the necessary information.
   - MAC (Ethernet) Address : The MAC (Ethernet) address of the applicable network device will be set automatically so you don't need to input it manually.

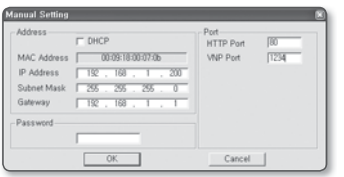


▪ You can configure the static IP settings only if the DHCP checkbox is unchecked.

If not using a Broadband Router

For setting <**IP Address**>, <**Subnet Mask**>, and <**Gateway**>, contact your network administrator.

4. In the <**Port**> pane, provide necessary information.
   - HTTP Port : Used to access the network device using the Internet browser, defaulted to 80.
     Use the spin button to change the HTTP Port value.
   - VNP Port : Used to control video transfer from a network camera or encoder.
     The Network Video Decoder's VNP port needs no configuration. The default value is 1234, which is not to be modified.



5. Enter the password.
   This is the login password for the "**admin**" user who accesses the network device.
   The default password is "**4321**".

▪ The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.
Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

6. Click [**OK**].
   Manual network setup will be completed.

If using a Broadband Router

- IP Address : Enter an address falling in the IP range provided by the Broadband Router.
  ex) 192.168.1.2~254,
  192.168.0.2~254,
  192.168.XXX.2~254
- Subnet Mask : The <**Subnet Mask**> of the Broadband Router will be the <**Subnet Mask**> of the Network Video Decoder.
- Gateway : The <**Local IP Address**> of the Broadband Router will be the <**Gateway**> of the Network Video Decoder.

▪ The settings may differ depending on the connected Broadband Router model. For more information, refer to the user manual of the applicable router.

If the Network Video Decoder is connected to a Broadband Router

Configure the IP related settings and the Port related settings distinctly with each other.

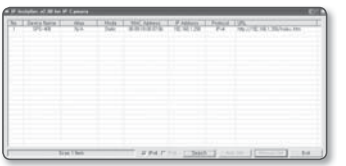
Category		Decoder #1	Decoder #2
IP related settings	IP Address Subnet Mask Gateway	192.168.1.200 255.255.255.0 192.168.1.1	192.168.1.201 255.255.255.0 192.168.1.1
Port related settings	HTTP Port	8080	8081

▪ If the <**HTTP Port**> is set other than 80, you must provide the <**Port**> number in the address bar of the Internet browser before you can access the Network Video Decoder.
ex) http://IP address : HTTP Port
http://192.168.1.200:8080

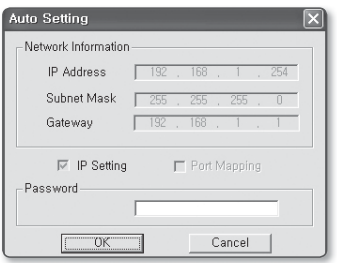
Auto Network Setup

Run <**IP Installer_vX.XX.exe**> to display the network device search list.
At the initial startup, both [**Auto Set**] and [**Manual Set**] will be grayed out.

- For network devices found with the IPv6 setting, these buttons will be grayed out as the cameras do not support this function.



1. Select a network device from the search result.
   Find the MAC (Ethernet) address labeled on the rear of the network device.
   Both the [**Auto Set**] and [**Manual Set**] buttons will be activated.
2. Click [**Auto Set**].
   The Auto Setting dialog appears.
   The <**IP Address**>, <**Subnet Mask**>, and <**Gateway**> will be set automatically.
3. Enter the password.
   This is the login password for the "**admin**" user who accesses the network video decoder.
   The default password is "**4321**".
   - The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.
     Note that the security and other related issues caused by the unchanged password shall be responsible for the user.



4. Click [**OK**].
   Auto network setup will be completed.

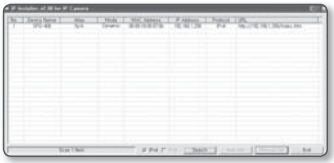
DYNAMIC IP SETUP

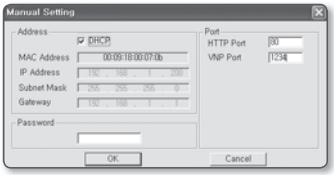
Dynamic IP Environment Setup

- Example of the Dynamic IP environment
  - If a Broadband Router, with a network device connected, is assigned an IP address by the DHCP server
  - Network device is connected to a DHCP based modem directly
  - If IPs are assigned by the internal DHCP server via the LAN

Checking the Dynamic IP

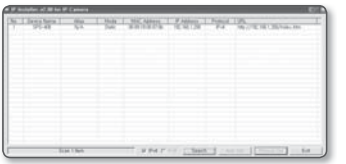
1. From a local PC, run <**IP Installer**> to display a list of network devices that are assigned <**Dynamic IP**>.
2. Select a network device in the list, and click [**Manual Set**] to check the <**Dynamic IP**> of the network device. If you uncheck <**DHCP**>, you can change IP to <**Static**>.





CONNECTING TO THE NETWORK DEVICE FROM A SHARED LOCAL PC

1. Run the IP Installer.
   Searches for connected network devices and displays on the list.
2. Double click the desired network device to connect to.
   The Internet browser starts and connects to the network device.

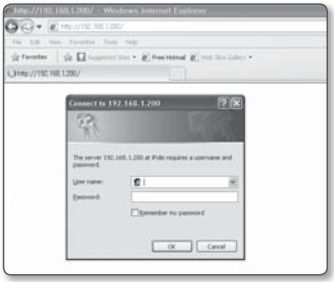


- You can also access the camera in such way you type the IP address of the found network device in the address bar of the Internet browser

ACCESSING THE NETWORK VIDEO DECODER

Normally, you would

1. Launch the Internet browser.
2. Enter the Network Video Decoder's IP address into the address field.
   ex) • IP address (IPv4) : 192.168.1.200
   → http://192.168.1.200
   - the Login dialog should appear.
   • IP address (IPv6) : 2001:0230:abcd:ffff :0000:0000:ffff:1111
   → http://[2001:230:abcd:ffff:::ffff:1111]
   - the Login dialog should appear.



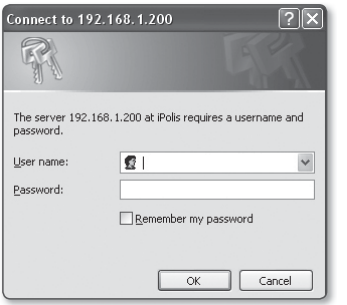
If the HTTP port is other than 80

1. Launch the Internet browser.
2. Enter the Network Video Decoder's IP address and HTTP port number into the address field.
   ex) IP address : 192.168.1.200:HTTP Port number(8080)
   → http://192.168.1.200:8080
   - the Login dialog should appear.

LOGIN

The default user ID is "**admin**", and the default password is "**4321**".

1. Enter "**admin**" in the <**User Name**> input box.
2. Enter "**4321**" in the <**Password**> input box.
   If the password is changed, enter the changed password instead.
3. Click [**OK**].
   Once logged in, the network video decoder's setup screen appears.



- For security purposes, ensure that you change the password in <**System**> - <**User**>.
  The administrator ID, "**admin**", is fixed and can not be changed.
- The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.
  Note that the security and other related issues caused by the unchanged password shall be responsible for the user.
- If you check the "**Remember my password**" option when your input is done, in future you will be logged in automatically without being prompted to enter the login information.

- If you are using Internet Explorer 7.0 or 8.0 as the default web browser, you can view the best quality image with a screen ratio of 100%. Reducing the ratio may cut the image on the borders.

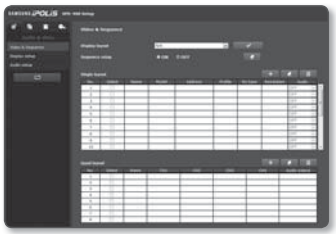
SETUP

You can configure the audio & video, network, event and system settings of the network video decoder remotely.

- Depending on the firmware version of network camera/encoder, registering such devices to the network video decoder may fail or work improperly. Visit www.samsungtechwin.com to download the latest firmware and update it.

AUDIO & VIDEO SETUP

Video & Sequence



1. From the Setup menu, select the <**Audio & Video (** **)**> tab.
2. Select <**Video & Sequence**>.
3. Click the input box of each item and enter / select a desired value.
   - Display layout : Select a desired layout for the monitoring screen from the single or quad layout.
   - Sequence setup: Select whether to use automatic monitoring sequence, and select layout and dwell time of the sequenced layout.
     - The display automatically cycles through the assigned layouts according to the configured dwell time in the sequence of the setting. Up to 10 layouts can be selected from the single and quad layouts and sequenced.
   - Single layout : You can add network camera/encoder operating in the network, or edit/delete registered single layouts.
     - It is the basic unit of display layout for network camera/encoder connected to the network video decoder.
       After adding a network camera/encoder's single layout, select the added single layout's camera name to display the network camera/encoder's video on the monitoring screen.
       Up to 20 network cameras or encoders can be added.
   - Quad layout: You can composite, edit or delete a 4-split layout by selecting added single layouts.
     - Compose a quad layout by selecting single layouts of network camera/encoder for displaying 4-split monitoring screen.
       Assign added single layouts of network cameras/encoders to a quad layout, and select the composed quad layout to display 4-split screen on the monitor. Up to 8 quad layouts can be added.

To add a single layout

1. Click the [**Add video (** **)**] button.
2. Enter the network camera/encoder's information.
3. Enter the IP address or DDNS URL of the device to be added into the <**Address**> field.
   - Up to 64 letters can be entered, and the layout list displays up to 9 letters and <**…**> will appear for the rest.
4. Enter the ID and password for the device to be added.
5. Click [**Import Properties (** **)**] button to fetch information on the device to be connected.
   - Check <**Include additional user profiles**> to fetch user-defined profiles added to the device to be connected. For AXIS cameras, all available profiles are imported regardless of this option.
   - Cannot add the camera if it has no profile.

6. Enter the <**Camera name**> after the fetched information appears.
   - The camera name allows no blank space within the name.
   - Up to 15 letters can be entered, and the layout list displays up to 7 letters and <…> will appear for the rest.
7. Select a profile.
8. Click the [**Add (** **+** **)**] button.

- Up to 20 layouts can be added.
- Click [**Camera Setting (** **)**] button to display a browser for accessing the added camera's web page.

Available resolutions for single layout

CODEC	H.264	MPEG-4	MJPEG
Single layout	1920x1080p~ 320x240	4CIF ~ 320x240	1280x720p ~ 320x240 (except 800x600)

To edit existing layout

1. Click the checkbox to select an added device.
2. Edit the existing information.
   - Note that <**Protocol**> and <**Address**> fields are not allowed to edit.
3. Click [**Save (** **)**].
4. To cancel, click the [**Cancel (** **)**] button.

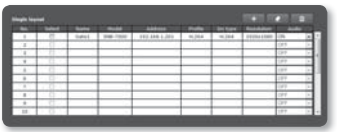
To delete existing layout

1. Click the checkbox to select an added device.
2. Click [**Delete (** **)**] button on the top of the layout list.
3. When a confirmation message appears, click [**OK**].

- A layout that is used by a <**Quad layout**> or in the <**Sequence setup**>, or currently displayed on the monitoring screen cannot be changed or deleted, and such an attempt will display a confirmation message.

To set the audio for the added single layout

1. From the list of added single layouts, set the audio to <**ON**> or <**OFF**> to your preference.
   - For a device configured to output audio, it cannot be switched from <**OFF**> to <**ON**> in quad mode layout. A confirmation message appears on such an attempt.
   - Audio can be selected only when the device's audio output is set to <**ON**> in its single layout configuration.



To add a quad layout

1. Click the [**Add quad layout (+)**] button.
2. Select devices from the added single layouts to be assigned to each channel.
3. Enter the <**Layout name**>.
   - Up to 15 letters can be entered, and the layout list displays up to 7 letters and <…> will appear for the rest.

4. Select the audio output channel of the quad layout from the assigned 4 channels. You can select a device if the device's audio is set to <**ON**> in its single layout.
5. Click the [**Add (+)**] button.

- Up to 8 quad layouts can be added. Note that one single layout cannot be assigned to the same quad layout multiple times.
  However, a single layout can be assigned to multiple quad layouts.

Available resolutions for quad layouts

Some resolutions may not be supported by quad layout of the Network Video Decoder, depending on the CODEC used.
Selecting a not supported resolution will display an error message.
Before adding, refer to the available resolutions below.

CODEC	H.264	MPEG-4	MJPEG
Quad layout	1280x720p ~ 320x240 (except 800x600)	4CIF ~ 320x240	1280x720p ~ 320x240 (except 800x600)

- In Quad mode display of resolution less than 960x540, each video will be centered to its split screen if all 4 channels' videos have the same resolution. At the moment, 320x240 and 352x240 video will be enlarged to 640x480 and 704x480 respectively.

<2nd split displays video having resolution of less than 960x540>

To edit a quad layout

1. Click the select checkbox of the desired layout from the list.
2. Make your changes with assigned channel or edit the layout name.
3. Click [**Save (**)].
4. To cancel, click the [**Cancel (**)] button.

To delete a quad layout

1. Click the select checkbox of the desired layout from the list.
2. Click the [**Delete (**)] button.
3. When a confirmation message appears, click [**OK**].

- A QUAD layout that is included in the <**Sequence setup**>, or currently displayed on the monitoring screen cannot be changed or deleted, and such an attempt will display a confirmation message.

To set a sequence

1. Press the [**Sequence setup ( )**] button.
2. Select layouts in the order you want to display in sequence.
3. Enter the interval of the layout transition.
4. When done, click [**Apply ( )**].
5. Set the sequence setup to <**ON**>. Selected layouts are displayed in the specified order, switched at the specified interval.

To select the layout to be displayed on the monitor

You can set a layout to be displayed on a connected monitor.

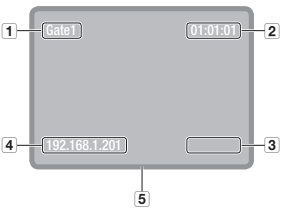
1. Click the "Display layout" list to display available layouts.
   Select a layout to be displayed on the screen.

2. When done, click [**Apply ( )**].
   - If the Sequence Setup is set to <**ON**>, the <**Display layout**> listbox is disabled.

Display setup

1. From the Setup menu, select the <**Audio & Video ( )**> tab.
2. Click <**Display setup**>.
3. Click the input box of each item and enter / select a desired value.
   - Monitor : Select the target monitor type for video display.
   - Resolution : Select the monitor's resolution.
     - When selected <**CVBS**>, the menu will be changed to <**CVBS type**>.

- OSD position : Selects the position of the on-screen display menu.
  If you change the number of OSD positions it will be moved to set number based on the entire screen.
- OSD display : Select types of OSD to be displayed on the monitor.
  - 1 Camera name : Shows the camera's name used when registering the layout.
  - 2 Decoder time : Shows the time set to the decoder.
  - 3 Alarm / Error : Shows alarm/error on the monitor when occurred.
  - 4 IP address : Shows the camera's IP address.
  - 5 Border : Separates each camera's screen with border lines.



- Preview ( ) : Previews changed OSD related settings, and applies when confirmed.
  Applying OSD setup changes does not affect monitor settings.

4. When done, click [**Apply (** **)**].

Audio setup

You can setup audio in/out settings of devices connected to the network video decoder.

1. From the Setup menu, select the <**Audio & Video (** **)**> tab.
2. Click <**Audio setup**>.
3. Adjust the audio I/O levels to your preference.
   - Audio output : Set whether to use audio or not, and its output method.
   - Gain : It is enabled when selected <**Line out**>, and set the value.

- Audio is produced only if the device connected supports audio input and set to on.
- To select HDMI audio out, the Monitor setting of Display Setup should be set to HDMI.

4. When done, click [**Apply (** **)**].

NETWORK SETUP

Interface

1. From the Setup menu, select the <**Network (** **)**> tab.
2. Click <**Interface**>.
3. Set the <**Connection mode**> and <**IPv6 setup**> as necessary.
   - IP type : Select an IP connection type.
     - Manual : Specify the IP address, Subnet Mask, Gateway, DNS1, and DNS2.
     - DHCP : Specify the DNS1 and DNS2.
     - If you set it to <**Manual**>, you should specify the IP, Subnet mask, Gateway, DNS 1 & 2 manually.
   - MAC address : Shows the Network Video Decoder's MAC address.
   - IP address : Displays the current IP address.
   - Subnet mask : Displays the <**Subnet Mask**> for the set IP.
   - Gateway : Displays the <**Gateway**> for the set IP.
   - DNS1/DNS2 : Displays the DNS(Domain Name Service) server address.
   - HTTP port : HTTP port used to access the Network Video Decoder via the web browser. The default is 80 (TCP).
   - IPv6 use : Specify the use of IPv6.
   - IPv6 address : Obtains the IPv6 address to access the IPv6 network.
4. When done, click [**Apply (** **)**].

SSL

You can select a secure connection system or install the public certificate for this purpose.

1. From the Setup menu, select the <**Network (** **)**> tab.
2. Click <**SSL**>.
3. Select a secure connection system.
   - When accessing the Network Video Decoder using secure HTTPS mode, enter the IP address into the address field as: https://<Network Decoder_IP>.
4. Search and add a certificate for the Network Video Decoder.
   To install the certificate to the Network Video Decoder, you need to type in the certificate name (it can be arbitrarily assigned by user), and specify the certificate file issued from the authority, and a key file.
   - The <**HTTPS(Secure connection mode using the public certificate)**> item will be active only if there exists a public certificate installed.
5. When done, click [**Apply (** **)**].

Installing the Certificate

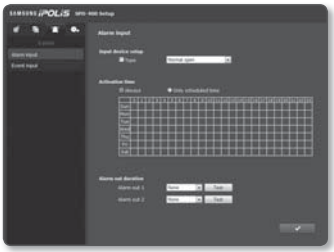
1. Enter the certificate's name.
2. Select the desired certificate file and its key file, and click [**Install (** Install **)**] button.

Deleting a certificate

1. Click [**Delete (** Delete **)**] button.
2. To delete a public certificate, you should access the network video decoder in the mode of <**HTTP (Do not use secure connection)**> or <**HTTPS (Secure Connection mode using a unique certificate)**>.

Alarm input

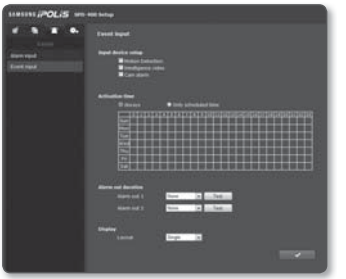
You can set the alarm input type, duration and action type of the Network Video Decoder's alarm input port.



1. From the Setup menu, select the <**Event (** **)**> tab.
2. Click <**Alarm input**>.
3. Select the input device type.
   - Type
     - Normal open : It is normally open, but if it is closed, an alarm will be triggered.
     - Normal close : It is normally closed, but if it is open, an alarm will be triggered.
4. Specify the <**Activation time**>.
   - Always : Always check if an alarm occurs. It activates in operated mode when the alarm occurs.
   - Only scheduled time : Check if an alarm occurs at a specified day of the week for a specified time period. It activates in operated mode when the alarm occurs.
5. Set the alarm's output dwell time when an alarm occurs.
   - Alarm output : Specify the alarm output time in the alarm input setup.
     - If the alarm out duration is set to <**Always**>, the alarm continues to function until the alarm acknowledge button is pressed, as expressed in Audio & Video page.
   - Test : Conducts a test alarm for the connected alarm out device.
6. When done, click [**Apply (** **)**].

Event input

You can set the alarm duration and alarm's action type of the network camera or encoder.



1. From the Setup menu, select the <**Event (** **)**> tab.
2. Click <**Event input**>.
3. Specify an event input device.
   - Input device setup
     - Motion Detection : Recognizes a detected motion from the connected device as an alarm.
     - Intelligent video : Recognizes a detected intelligent video analysis event from the connected device as an alarm.
     - Cam alarm : Recognizes a sensor input event from the connected device as an alarm.

▪ Operable only when the camera registered to the layout supports applicable function and set to on.

4. Specify the activation time.
   - For <**Activation time**> setup, refer to "**Alarm input**". (Page 41)
5. Set <**Alarm out duration**> for each alarm.
6. Select the <**Layout**> for each device's video display on an event.
   If <**Quad**> mode is selected and the desired single layout is assigned to two quad layouts, the quad layout having smaller layout number is selected and displayed.
   When an event occurs, the layout selected for the event is displayed along with alarm border and alarm message according to the specified display setup, until the alarm acknowledge button is pressed in the Audio & Video page.
   When the alarm acknowledge button is pressed, the screen returns to the layout previous to the event.
7. When done, click [**Apply (** **)**].

SYSTEM SETUP

Product information

1. From the Setup menu, select the <**System (** **)**> tab.
2. Click <**Product information**>.
3. Check the Network Video Decoder information, or provide details according to your network environment.
   - Device name : Enter the Network Video Decoder's name.
   - Location : Describe the location of the installed Network Video Decoder.
   - Description : Enter the additional detailed information on the installed Network Video Decoder.
   - Memo : Provide an explanation about the network encoder for better understanding.
   - Language : Select a preferred language for the network encoder menus and the Web Viewer OSD.
4. When done, click [**Apply (** **)**].

Date & Time

1. From the Setup menu, select the <**System (** **)**> tab.
2. Click <**Date & Time**>.
3. Set the network video decoder's system time.
   - Current system time : Displays the current time settings of your system.
   - Timezone : Specify the local time zone based on the GMT.
   - Use daylight saving time : If the region of installed location is applicable with DST, you can select whether to apply DST or not.

- System time setup : Specify the time and date that will be applied to your system.
  - Manual : Specify the time manually.
  - Synchronize with NTP server : Sync with the time of the specified server address.
  - Synchronize to PC Viewer : Synchronize the time with the connected PC.

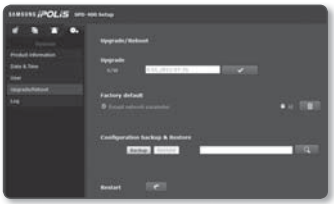
4. When done, click [**Apply (** ✓ **)**].

■ If you select the <**Synchronize to PC Viewer**>, the standard timezone should be set the same as the current timezone in PC.

User

1. From the Setup menu, select the <**System (** ⚙ **)**> tab.
2. Click <**User**>.
3. Provide the necessary user information.
   - Administrator password change : Change the current password for the administrator.
     ■ The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.
     Note that the security and other related issues caused by the unchanged password shall be responsible for the user.
   - Current user : You can change the user information and adjust the permission level for a user who is set to <**Enable**>.
     - controls : If set to on, all menu items except the user account administration can be used.
     - Enable : Activates the user account.
4. When done, click [**Apply (** ✓ **)**].

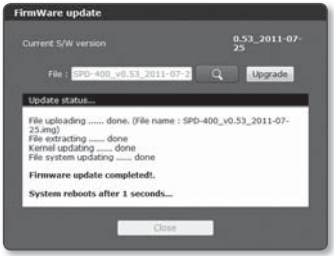
Upgrade/Reboot



1. From the Setup menu, select the <**System (** **)**> tab.
2. Click <**Upgrade/Reboot**>.
3. Select a desired item and set it appropriately.
   - Upgrade : Performs upgrading the system.
   - Factory default : Resets the system to the factory default.
     - Except network parameter : Resets all settings except for the Network Parameters.
     - All : Resets all settings including the Network Parameters.
   - Configuration backup & Restore : Backs up the current system settings before performing the restoration process. The system is automatically restarts after backup or restoration.
   - Restart : Restarts the system.

To perform the upgrade

1. Click [ ].
2. Click [ ] and specify a file to upgrade.
3. Click [**Upgrade**].

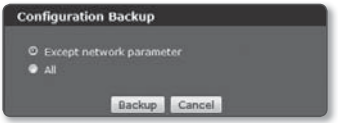


4. The "**Update status**" dialog appears where the progression will be shown in the bottom.

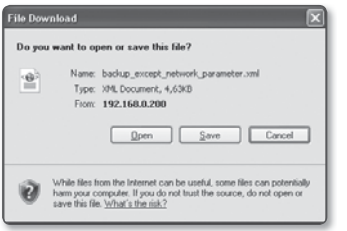
- If you forcibly terminate the upgrade process, upgrade will not be completed properly.

To save the current settings and restore the backup settings

1. Click [**Backup**].
   The Save As dialog should appear.

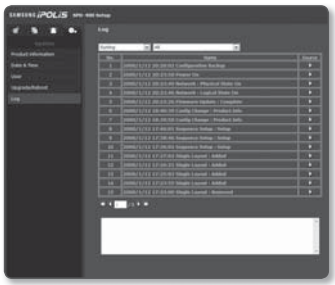


2. Specify the backup path with a proper file name, and click [**Save**].
   The backup file will be saved to the specified path in the format of "**.xml**".
3. To restore the settings from a backup, select the backup file.
4. Click [**Restore**].
   Once the restoration completes, the system will restart.


File Download
Do you want to open or save this file?
Name: backup_except_network_parameter.xml
Type: XML Document, 4,63KB
From: 192.168.0.200
Open
Save
Cancel
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?

Log

You can check the system log or event log.



1. From the Setup menu, select the <**System (** **)**> tab.
2. Click <**Log**>.
3. Select a log type.
   - Syslog : You can check the system logs where any system changes are recorded including the time information.
   - Evtlog : You can check the event logs including the time information.
4. From the right log list, select an item to search for.
   - If you select <**All**> in the top left dropdown list, all logs for the applicable log type will be displayed.
5. If one page can not display all the logs available, use the bottom buttons to move to the previous, next, or the last item.

- If you want to view the details of a log, click [**Source (** **)**] in the right column of the log; the log information will be shown in the bottom pane.
- Each page displays 15 logs with the latest one displayed at the top.
- The event/system log list can contain up to 1000 logs; after that, the existing logs will be deleted from the oldest one each time a new log is created.

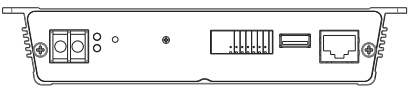
SPECIFICATION

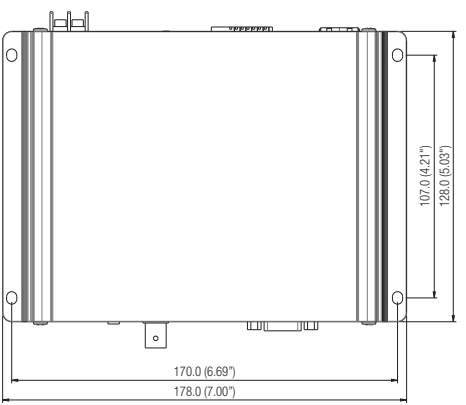
Items		Description
Video Out	Video Out	1) HDMI / VGA : Max 1920x1080p (same output resolution for HDMI, VGA) 1920x1080p, 1680x1050, 1600x900, 1440x900, 1280x1024, 1280x720p, 1024 x 768 2) CVBS : NTSC : 1.0 Vp-p / 75Ω composite 704x480 PAL : 1.0 Vp-p / 75Ω composite 704x576 3) Select from HDMI/VGA, CVBS
	Video Latency	1) H.264 : 3.5 seconds in maximum 2) MPEG-4 : 2 seconds in maximum 3) MJPEG : 2 seconds in maximum
	Event Trigger	Alarm input, Network camera event input
	Alarm I/O	Input 1ea / Output 2ea (Relay)
Network	Ethernet	RJ-45 (10/100/1000BASE-T)
	Video Compression Format	H.264, MPEG-4, MJPEG
	Resolution	1) H.264 - Single View :1920x1080p ~ 320x240 - Quad View : 1280x720p ~ 320x240 (except 800x600) 2) MPEG-4 : - Single View : 4CIF ~ 320x240 - Quad View : 4CIF ~ 320x240 3) MJPEG : - Single Vlew : 1280x720p ~ 320x240 (except 800x600) - Quad Vlew : 1280x720p ~ 320x240 (except 800x600) 1920x1080p, 1280X1024, 1280X720p, 704x576, 704x480, 640x480, 352x288, 352x240, 320x240
	Max. Framerate	Max. 30fps at single view, Max. 120fps at 4x (640x480), Max. 100fps at 4x4 CIF, Max 60fps at 4x720p (when audio is disabled)
	Display	Single layout, Quad layout

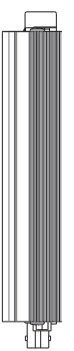
Items		Description
Network	Audio I/O	1 Line Out
	Audio Compression Format	G.711
	IP	IPv4, IPv6
	Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), NTP, HTTP, DHCP, ICMP, IGMP, ARP, SSL, DNS
	Security	HTTPS(SSL) Login Authentication User access Log
	Camera connections	20 cameras, 8 layouts, 10 sequences
	ONVIF Conformance	Not supported
	Supported Devices	Samsung : SNV-3120, SNP-3430H, SNP-3120, 3120V, 3120VH, SNB-5000, SNB-7000 (Supports profiles of less than 2M), SND-5080/F, SNV-5080, SNV-5010, SPE-100,400, SPE-1600R/400B Axis : P3301, P3343, P3344, P1311, P1343, P1344, P1346, PTZ215, Q6032, Q7401, Q7404 (F/W ver : 5.x) 1) Stream(Live Video/Audio) : SVNP 1.2 (AXIS : RTP/RTSP) 2) Control/Network alarm : SVNP 1.2 (AXIS : Not supported)
	Web Viewer	Supported OS : Windows XP / VISTA / 7 Supported Browser : Internet Explorer 7.0 or 8.0, Firefo x2.x, 3.x, Chrome, Safari
Environmental	Operating Temperature / Humidity	+0°C ~ +40°C (+32°F ~ +104°F) / 0% ~ 90% RH
Electrical	Input Voltage	DC 12V
	Power Consumption	Max. 10W
Mechanical	Color / Material	Silver / Metal
	Dimensions (WxHxD)	W178.0 x H34.0 x D128.0mm (W7.00 x H1.33 x D5.03inch)
	Weight	530g

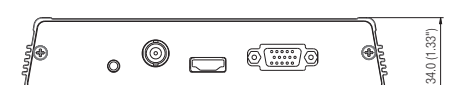
PRODUCT OVERVIEW

Unit : mm (inch)









TROUBLESHOOTING

PROBLEM	SOLUTION
Cannot access the Network Video Decoder with an internet browser.	• If restarting the network video decoder does the same, press and hold [**RESET**] button for about 5 seconds to reset the Network Video Decoder's settings. • Check to make sure that all network cables have been connected properly. • For DHCP environment, check whether the Network Video Decoder is properly assigned with a dynamic IP address.
I cannot connect to the system using a tab browser of Internet Explorer 7.0.	• When you try to connect to the system using a tab browser, the same cookie information is shared, resulting in errors when connected. Therefore, instead of using a tab browser, open a new browser window to connect to the system.
IP Installer program fails to search the Network Video Decoder installed in the network.	• Turn off the firewall settings on your PC and then search the network encoder again.
Nothing is displayed on the monitor.	• Check if the monitor is connected to the network video decoder and matches the output mode. • Check if the monitor supports and matches the Network Video Decoder's output resolution.
Monitor displays nothing but the logo and will not switch to other screen.	• If restarting the network video decoder does the same, press and hold [**RESET**] button for about 5 seconds to reset the Network Video Decoder's settings.

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Component Name	License	License URL
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For more additional information, send email to help.cctv@samsung.com.

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Version 2.1, February 1999

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